

City of Norfolk
Building Construction Services Division Policy
Build-04-001

Porch Footings

Patio Covers are regulated in Appendix H of the International Residential Code 2000 edition adopted by the Virginia Uniform Statewide Building Code. Section R403 states in part:

R403.1 General. *All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, wood foundations, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined from the character of the soil. Footings shall be supported on undisturbed natural soils or engineered fill.*

Exterior walls are defined as:

EXTERIOR WALL. An above-grade wall enclosing conditioned space. Includes between floor spandrels, peripheral edges of floors, roof and basement knee walls, dormer walls, gable end walls, walls enclosing a mansard roof, and basement walls with an average below grade wall area that is less than 50 percent of the total opaque and nonopaque area of that enclosing side.

Patio covers are not considered to have an exterior wall and are addressed in Section AH106.1 that states in part:

AH106.1 General. *In areas with a frostline depth of zero as specified in Table R301.2(1), a patio cover shall be permitted to be supported on a slab on grade without footings, provided the slab conforms to the provisions of Section R505 of this code, is not less than 3.5 inches (89 mm) thick and the columns do not support live and dead loads in excess of 750 pounds (3.34 kN) per column.*

This provision deems it acceptable to avoid a continuous footing under a patio cover if the load is within an acceptable limit (in this case 750 lbs) if the patio cover is not conditioned space. However, other forces affect the stability of an enclosed or partially enclosed patio cover. The issue of lateral design can be addressed by adequate connection to sufficient weight of a concrete footing under a post to resist the overturning moment caused by wind load.

For a small to medium size patio cover up to 15 feet projected from the exterior wall line, patio covers, connected to a single family residence may be supported with a point load footing under a corner or intermediate post as follows:

Depth from exterior wall	Length between supports	Footing size	Footing thickness	Footing depth below grade
10 feet	10 feet	20 inches ²	8 inches	12 inches
10 feet	15 feet	24 inches ²	12 inches	15 inches
15 feet	10 feet	24 inches ²	12 inches	15 inches
15 feet	15 feet	30 inches ²	15 inches	20 inches